

“LEARNING TO BE ACCOUNTABLE FOR OUR ACTIONS”*

NATURE PRESCHOOL TEACHERS’ CRAFT KNOWLEDGE OF SUSTAINABILITY EDUCATION



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INTRODUCTION

Teacher craft knowledge, that is, everything that teachers teach and what is built upon through their teaching over time (Barth, 2001), is location specific. The access that nature-based preschools (Natural Start Alliance, 2014) have to the outdoors, or lack thereof affects what is taught in these institutions.

In order to develop sustainable lifestyle practices, children need experiences that foster their interest *about* and *for* the environment as well as time spent *in* the environment (Elliot & Davis, 2009; 2018).

The **purpose of this study** was to examine whether craft knowledge of sustainability differs across different preschool locations.

Specifically, following Davis’ (2009/2010) differentiation among education *in*, *about*, and *for* the environment (sustainability education), this project examined these questions:

How do nature-based preschool teachers teach sustainability education?

What is encouraging to teachers about this work (i. e. times when teachers felt they made an impact on getting young children to understand the topic?

METHODS

Participating preschools were 9 nature-based* preschools in the Northeastern US.

*Nature-based preschools is the terminology used by the North American Association for Environmental Education to refer to schools that use nature as an organizing principle for their programs

Participating educators were 20 teachers (85.7% White; 100% female) Two administrators (100% White, 100% Female)

Data Collection
Contacted facilities via email
Conducted interviews and small focus groups on location
Classroom observations

Coding Procedure
First, transcribed recordings verbatim
Next, two researchers collaborated in the coding process to ensure reliability
Finally, confirmed transcriptions with participants to ensure validity and credibility

Analysis Procedure
Categorized stories and examples into education “in,” “about,” and “for” the environment following Davis’ (2009/2010) definitions
Following Braun & Clarke (2006) and Saldaña (2012) created preliminary codebook
Used codebook to analyze and re-categorize into themes and codes

Table 1 & 2 Participant and Preschool Demographics

Table 1. Participant Demographics	School	# of Participants	Description of learning space	Access to nature	Daily time spent outside
Preschool	A Private [rural]	1	“living building” intentionally planned nature-education classrooms	Woods on cite; 2 raised bed gardens	At least 2 hours; weather permitting entire duration of half day program
Location of Preschool	B Private [rural]	4	Nature-focused indoor classroom; plants in room; large windows with window seats for children to look out; lots of wooded area where they bring the children	Woods on site	At least 2 hours; weather permitted full day except for nap time
Type of Preschool	C Public [urban]	1	Traditional kindergarten classroom; outdoor space includes a small walking trail, raised beds, and a play structure	Small walking trail on site; 3 raised bed gardens	30 minutes to one hour
Participants	D Private [urban]	4	Montessori classroom; large outdoor space with field, wooded area and play structure	2 raised bed gardens	One to two hours
Gender	E Private [rural]	3	Nature-preschool classroom; water-play area with recycled play items; walking trail through woods; three-bin composting system on trail; hiking paths; compost bin in classroom; recycling bin in classroom	Woods on cite (set on 723 acres of conservation land)	At least one hour; full duration of half program when weather permits
Female	F Private [rural]	2	Intentionally planned Reggio-Emilia style preschool classroom; compost bin in classroom; large outdoor space with access to mud-play area, farm, woods, and garden	Woods on site; 6 raised beds; school has connection to neighboring farm	Between one and three hours
Male	G Public [urban]	1	Intentionally planned Montessori children’s house classroom; enclosed courtyard for outdoor play with raised bed gardens	4 raised beds in small courtyard	30 minutes to two hours
Age	H Private [urban]	2	Traditionally planned kindergarten classroom; outdoor space includes raised bed and large composting system	4 raised bed gardens	One to two hours
18-24	I Private [rural]	1	Outdoor forest kindergarten classroom set in woods; trail to get to outdoor classroom passes by farmland; indoor space is intentionally planned Waldorf early childhood classroom	Set in woods (forest kindergarten); farm on site	At least three hours
25-34					
34-44					
45-54					
Education level					
Bachelors					
Masters					
Doctorate					
Ethnicity					
White					
Black					
Years Teaching					
0-5					
6-10					
11-15					
16-20					
21 and above					

Note. N preschools = 9; N participants = 22.

Engaging in education in the environment in rural settings



“It’s just to encourage a comfort with this, and a familiarity with the garden with mud, and being outdoors in all weather – rain, snow, freezing cold, ice, heat – just all of it, to feel deeply bonded and connected to nature, and to have a love and connection that is built deep.” (Teacher at nature-based preschool)

Table 3 & 4 Samples of teachers’ craft knowledge & barriers

Table 3. Themes, Categories, and Codes for Preschool Teacher’s Craft Knowledge About, In, and For the Environment.							
Theme	About the environment	In the Environment		For the Environment			
Category	Traditional School Topics	Human made nature	Love and care for nature	Small environmental tasks	Immersion	Compost	Conservation behaviors
	Earth science	Pollinator garden	Being comfortable out in nature	Recycling bottles	‘this is just what we do as people’	Compost used for the garden	Cloth napkins and reusable snack containers
Codes	Seasonal curriculum	Farm education	Forest/tree study	Compost	Biomimicry	Differentiating between trash and compost	Reducing water use
	Engineering and design	Water play	Ability to get dirty	Turning lights/water off	Location	Composting worms	‘Reuse these items bins’

Table 4. Categories, and Codes for Preschool Teachers’ Perceptions of Barriers to Sustainable Education					
Category	Risk	Intersectionality	Overprotective Parents	Overprotected Kids	Consumerism
	Liability	Not accessible to disability	Concerned about the unknowns	Cold easily – don’t want to go outside	‘one-and-done, use-and-throw-away’ society
Codes	Money for training	‘not for working parents’	Top down fear	Screen time	Pre-packaged snacks
	Unknown outdoors	Gear and reusable containers are expensive	Parents put fear on children	Complain about not being able to walk a long distance	‘we aim for zero trash lunches’

RESULTS

Q1. What are nature-based preschool teachers’ craft knowledges of sustainability education within their curricula?

Unsurprisingly, most of the teachers included in the study reported on teaching education *in* the environment, meaning they are good at taking children out “to nature,” depending on their locations.

Because of parent influence, curricular necessities, and cultural barriers, teachers found including sustainability education difficult to include in their pedagogical approaches in their nature-based programs.

Q2. What is encouraging to teachers about this work (i. e. when teachers felt they made an impact on getting young children to understand sustainability?)

Many teachers noted that they find it inspiring when they noticed that their students were creating a connection with “nature,” and with, “the natural world,” due to the unstructured time that they had outdoors. However, this unstructured outdoor time was limited to those schools who had access to such spaces.

Those who did not have access to the woods or farms noted on their monarch butterfly units. They taught the children about monarch butterflies and their connection and interdependence on the milkweed plant. Therefore, they noticed that these children began to realize interconnectedness within “nature.”

DISCUSSION

The purpose of this study was to explore nature-based preschool teachers’ craft knowledge in relation to the location of their school.

The results of this study suggest that teachers make a consistent effort to include both education in the environment and about the environment in their pedagogical approaches to sustainability education. For example, many teachers combine these two approaches with outdoor scientific tree or water study.

As previously noted, what teachers are able to teach with regard to sustainability is largely dependent on the physical location of the facility. Therefore, the differences among schools is predicated upon the teachers’ understandings of what “nature,” is. That is, when teachers understand nature as something that they have to “go to,” rather than something that they are already part of, a disconnect is inherently created.

The disconnect from education in the environment to education for sustainability may occur because preschool teachers do not think children can cognitively understand the complex issues, such as climate change, that impact sustainability and pro-environmentalism.

The barriers participants identified to sustainability education are problematic because the culture of a school cannot change parent culture nor can it change larger culture nor societal norms or mores.

For the most part, teachers’ perceived problems to including sustainability within nature preschool curricula are seemingly out of individual schools’ control. Before large scale societal barriers are addressed, real sustainability education is almost impossible.

References

- Barth, R. S. (2001). *Learning by Heart*. San Francisco: Jossey-Bass Inc.
- Braun, V. & Clark, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77 – 101.
- Davis, J. M. (2009). Revealing the research ‘hole’ of early childhood education for sustainability: a preliminary survey of the literature. *Environmental Education Research*, 15(2), 227-241.
- Elliott, S. & Davis, J. (2009). Exploring the Resistance: An Australian Perspective on Educating for Sustainability in Early Childhood. *International Journal of Early Childhood*, 41(2), 65 – 77.
- Elliott S., Davis J. (2018). Moving Forward from the Margins: Education for Sustainability in Australian Early Childhood Contexts. In: Reis G., Scott J. (Eds.) *International Perspectives on the Theory and Practice of Environmental Education: A Reader*. Environmental Discourses in Science Education, vol 3. Springer, Cham.
- Natural Start Alliance. (2014). What is a nature preschool? Retrieved from <http://naturalstart.org/tags/naturepreschool/what-is-a-nature-preschool>.
- Saldaña, J. (2012). *The Coding Manual for Qualitative Researchers*. London, UK: Sage Publications, Ltd.

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